## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 21 May 2004 (21.05.2004)

PCT

## (10) International Publication Number WO 2004/041257 A3

- (51) International Patent Classification<sup>7</sup>: A61K 31/353, 31/16, 31/20, 31/385, 31/575, 31/12, A61P 3/04, 3/10, A23L 1/30
- (21) International Application Number:

PCT/EP2003/010838

(22) International Filing Date:

30 September 2003 (30.09.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 02024804.3

7 November 2002 (07.11.2002) EF

- (71) Applicant (for all designated States except US): DSM IP ASSETS B.V. [NL/NL]; Het Overloon 1, NL-6411 TE Heerlen (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): RAEDERSTORFF, Daniel [FR/FR]; 36c rue Bellevue, F-68350 Brunstatt (FR). TEIXEIRA, Sandra, Renata [PT/CH]; Gempenstrasse 46, CH-4053 Basel (CH). WEBER, Peter [DE/DE]; Im Grundacker 10, 79429 Malsburg-Marzell (DE).
- (74) Agent: SCHWANDER, Kuno, Josef; Roche Vitamins Ltd., Patent Department (VMD), Wurmisweg 576, CH-4303 Kaiseraugst (CH).

- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 5 August 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: NOVEL NUTRACEUTICAL COMPOSITIONS COMPRISING EPIGALLOCATECHIN GALLATE

(57) Abstract: The invention relates to nutraceutical compositions comprising at least two ingredients from the groups of EGCG, pantethine or a metabolite thereof, phytanic acid, lipoic acid, policosanol and coenzyme Q-10 and their use in the treatment or prevention of diabetes or obesity.

## INTERNATIONAL SEARCH REPORT



A. CLASSIFICATION OF SUBJECT MATTER IPC 7 A61K31/353 A61K31/16

A61K31/12 A61P3/04 A61K31/20 A61P3/10

A61K31/385 A23L1/30

A61K31/575

According to International Patent Classification (IPC) or to both national classification and IPC

### B. FIELDS SEARCHED

 $\begin{array}{ll} \mbox{Minimum documentation searched (classification system followed by classification symbols)} \\ \mbox{IPC 7} & \mbox{A61K} & \mbox{A61P} & \mbox{A23L} \end{array}$ 

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, EMBASE, WPI Data, PAJ, BIOSIS, FSTA

		<del></del>
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Х	US 5 976 568 A (RILEY PATRICIA A) 2 November 1999 (1999-11-02) column 6, line 63 - column 7, line 1; table II	1-27
X	WO 02/076436 A (MEIJER JAAP) 3 October 2002 (2002-10-03) page 5, lines 4-6; examples 1-3,6,7	1-26
X	US 2002/132219 A1 (MCCLEARY LARRY) 19 September 2002 (2002-09-19) paragraphs '0005!, '0006!	1-26
Х	US 2002/155163 A1 (BENJAMIN SAMUEL D ET AL) 24 October 2002 (2002-10-24) paragraphs '0018!, '0023!	1-20, 22-27
	-/	

Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
Special categories of cited documents:  A' document defining the general state of the art which is not considered to be of particular relevance  E' earlier document but published on or after the international filing date  L' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  O' document referring to an oral disclosure, use, exhibition or other means  P' document published prior to the international filing date but later than the priority date claimed	<ul> <li>'T' later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</li> <li>'X' document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</li> <li>'Y' document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</li> <li>'&amp;' document member of the same patent family</li> </ul>
Date of the actual completion of the international search  13 May 2004	Date of mailing of the International search report 01/06/2004
Name and mailing address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2  NL - 2280 HV Rijswljk  Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  Fax: (+31-70) 340-3016	Authorized officer Zimmer, B



Into al Application No
PCT/EP 03/10838

C (Cardin	ANALY POSIDIENTS CONSIDERED TO THE TOTAL TOT	PCT/EP 03/10838		
C.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT  Citation of document, with indication, where appropriate, of the relevant passages	I Delegat to state at		
		Relevant to claim No.		
X	WO 01/32168 A (JUVENON INC) 10 May 2001 (2001-05-10) page 16, lines 9-20	1-20,27		
Υ	WO 02/072086 A (CONSORZIO PER GLI STUDI UNI ;SUZUKI HISANORI (IT)) 19 September 2002 (2002-09-19) claim 3	1-27		
Υ	EP 1 177 789 A (ROCHE VITAMINS AG) 6 February 2002 (2002-02-06) claim 1	1-27		
Υ	RETT K ET AL: "'Lipoic acid acutely ameliorates insulin sensitivity in obese subjects with type 2 diabetes!. ALPHA-LIPONSAURE (THIOCTSAURE) STEIGERT DIE INSULINEMPFINDLICHKEIT UBERGEWICHTIGER PATIENTEN MIT TYP-II-DIABETES" DIABETES AND STOFFWECHSEL, KIRCHHEIM, DE, vol. 5, no. SUPPL 3, 1996, pages 59-63, XP002113908 ISSN: 0942-0037 abstract	1-27		
Υ	MCCARTY M F: "TOWARD PRACTICAL PREVENTION OF TYPE 2 DIABETES" MEDICAL HYPOTHESES, EDEN PRESS, PENRITH, US, vol. 54, no. 5, May 2000 (2000-05), pages 786-793, XP001019681 ISSN: 0306-9877 page Y	1-27		
<b>Y</b>	MCCARTY M F: "Hepatothermic therapy of obesity: Rationale and an inventory of resources" MEDICAL HYPOTHESES 2001 UNITED KINGDOM, vol. 57, no. 3, 2001, pages 324-336, XP009030758 ISSN: 0306-9877 p. 331, left col., last paragraph abstract	1-27		
E	WO 2004/017766 A (EGGERSDORFER MANFRED LUDWIG; TEIXEIRA SANDRA RENATA (CH); WEBER PE) 4 March 2004 (2004-03-04) the whole document	1-27		





### INTERNATIONAL SEARCH REPORT

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. X Claims Nos.: — because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT — Method for treatment of the human or animal body by therapy Although claim 27 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
Claims Nos.:     because they relate to parts of the international Application that do not comply with the prescribed requirements to such an extent that no meaningful international Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)
This International Searching Authority found multiple inventions in this international application, as follows:
As all required additional search fees were timely paid by the applicant, this international Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark on Protest
No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT matter on patent family members

Internal Application No PCT/EP 03/10838

							03/10838
	atent document d in search report		Publication date		Patent family member(s)		Publication date
US	5976568	Α	02-11-1999	NONE			
WO	02076436	Α	03-10-2002	NL.	1017707		01-10-2002
				WO	02076436	AZ	03-10-2002
US	2002132219	A1	19-09-2002	US	2004043013	8 A1	04-03-2004
us	2002155163	A1	24-10-2002	NONE			
WO	0132168	Α	10-05-2001	CA	2389623		10-05-2001
				EP	1248609		16-10-2002
				JP	2003513039		08-04-2003
				WO US	0132168		10-05-2001
				US	6335361 2002077349		01-01-2002
							20-06-2002
WO	02072086	Α	19-09-2002	IT	VR20010031	A1	12-09-2002
				EΡ	1411920		28-04-2004
				WO	02072086	A2	19-09-2002
EP	1177789	Α	06-02-2002	EP	1177789	A2	06-02-2002
				BR	0103209		26-03-2002
				CA	2353805		04-02-2002
				CN	1365667	Α	28-08-2002
				JP	2002104964		10-04-2002
				US 	2002082298	A1	27-06-2002
WO	2004017766	Α	04-03-2004	WO	2004017766	 A1	04-03-2004